

UNITED STATES
DEPARTMENT OF INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

MAY 01 2009

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICE AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or to enter to a different reservoir. Use "Form 3160-DRILL" for permit for such proposals

Bureau of Land Management
Farmington Field Office

5 Lease Designation and Serial No.
NMSF-078771
6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPPLICATE

1. Type of Well
Oil Well Gas Well ☒ Other

7 If Unit or CA, Agreement Designation
Rosa Unit

2. Name of Operator
WILLIAMS PRODUCTION COMPANY

8. Well Name and No.
Rosa Unit #009C

3. Address and Telephone No.
PO Box 640 Aztec, NM 87410-0640

9. API Well No.
30-039-30179

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SHL - 380' FSL & 1135' FWL / BHL - 380' FSL & 330' FWL, Sec. 11, T31, R6 NMPM

10. Field and Pool, or Exploratory Area
BLANCO MESAVERDE/BASIN DAKOTA

11. County or Parish, State
Rio Arriba, New Mexico

CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

TYPE OF ACTION

Notice of Intent

☒ Subsequent Report

Final Abandonment

Abandonment

Recompletion

Plugging Back

Casing Repair

Altering Casing

☒ Other Completion

Change of Plans

New Construction

Non-Routine Fracturing

Water Shut-Off

Conversion to Injection

Dispose Water

(Note: Report results of multiple completion on Well Completion or Recombination Report and Log form.)

- 13 Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

RCVD MAY 5 '09

OIL CONS. DIV.

DIST. 3

04-08-2009

Recap: Move rig from Jaeco well site to location, we are sharing pad w/ existing coal well w/ pump jack & loc is pretty tight, spot in rig ramp & all surface equip, spot rig onto ramp & put air equip in front of rig, (while tail rolling fuel tank to loc, tank was leaking a fine mist out of pop off valve on top of tank, lost approx 10 to 15 gals fuel on lease road, very fine mist but it is approx 1/4 mile long, inspect tank & install plug, contact Ronnie Shorter & report spill, Triple S contacted their safety dept. PU tools & SIWFN.

04-09-2009

Recap: RU over well, RU pump, pit & all hardline. NDWH & NU frac valve & BOP stack, NU 6" blooie line, RU rig floor, psi test csg & blind rams @ 1560 psi for 30 min w/ 10 psi leak off, change out handling tools & pipe rams to 2 3/8". RU new tbg tongs, MU 4 3/4" bit & B/S w/ no string float, tally, rabbit & TIH w/ 236 jts tbg (7620'). PU tools & SIWFN, drain up pumps & lines.

04-10-2009

Recap: Swap out tbg tongs, tally, rabbit & TIH w/ 18 jts 2 7/8" tbg & tag cmt @ 8188'. RU 2.5" PS, break circ w/ rig pump. DO 30' of med hard cmt to 8219', reverse circ well clean, RD 2.5" PS, TOOHH w/ bit, drain up pump, pit & lines, SIWFN.

14. I hereby certify that the foregoing is true and correct

Signed

Heather Riley

Title Regulatory Specialist

Date 4/29/09

(This space for Federal or State office use)

Approved by

Title

Date

Conditions of approval, if any:

ACCEPTED FOR RECORD

MAY 05 2009

FARMINGTON FIELD OFFICE

Page 2 – RU #009C

04-11-2009

Recap: ND stripper head & NU WL pack off, RU BWWC, RIH w/ CBL & tag bottom @ 8215', run CBL part way, there appears to be cmt behind csg but bond is questionable, run back to bottom & put 1000 psi w/ rig pump, run CBL under press & logs look a little better but want the Engineer to look @ log, BWWC will e-mail log to Engineer this evening. **TOC at 5,870'**. RD BWWC, ND pack off & NU stripper head, MU 1/2 M/S & TIH w/ 53 stds tbg, SD operations due to lightning for approx 20 min, finish TIH w/ tbg (127 stds), prepare to spot acid Monday A.M.

04-13-2009

Recap: Roll hole w/ 190 bbls of 2% KCL fluid, RU Halliburton acid pumper to 2" csg, psi test csg @ 3500 psi, spot 200 gal 15% HCL acid across DK perf interval. TOO H w/ tbg, RD rig floor, NDBOP stack & NU frac Y, RU BWWC to perforate. **RIH & perf DK bottom up f/ 8196' to 8007', 3 SPF @ 120 degree phazing w/ 3 3/8" SFG, .34" Dia, 21" Pen & 10 Grm Chgs, 26 location, 78 total holes, all shots fired**, RD BWWC. Load well w/ 20 bbls 2% KCL, BD DK @ 1833 psi, est rate @ 6 bpm @ 1732 psi, SD, ISIP = 1341 psi, RD Halliburton Services & SIWFN.

04-14-2009

Recap: SU rig, finish RU Halliburton & hook up remote. Psi test lines @ 6000 psi, BD DK @ 2025 psi, est 10 bpm rate, pump 48 bbls 15% HCL acid / 25 bpm @ 2514 psi, start on CL gel pad & have to SD due to blender malfunction, repair blender Re-pump XL gel pad, **Frac Dakota w/ 7500 lbs 100 Mesh BASF @ .25 ppg, .50 ppg, followed w/ 100,145 lbs 40/70 BASF @ .50 ppg, .75 ppg, 1.0 ppg & 1.25 ppg, prop carried in slick wtr, MIR = 50 bpm, AIR = 40 bpm, MTP = 3874 psi, ATP = 3148 psi, ISIP = 2800 psi, 5 min SI = 2482 psi, 10 min = 2400 psi, 15 min = 2340 psi, total fluid to recover = 4227 bbls**. RD Halliburton Serv, move in FB tank & RU to 2" csg valve, install 8/64" choke, open well to FB tank @ 1650 psi. Flow well to FB tank & record FB data.

04-15-2009

Recap: Flow well to FB tank on 8/64" choke & record FB data. SU rig & equip, psi on well is less than 100 psi, open well to FB tank on 2" open line. Well logged off, MU 4 3/4" bit & BS & noticed well flowing to tank, unload head off well & swap over to 32/64" choke. Flow well to tank & record FB data, change oils in rig, pump & gen set, turn well over to FB crew. Flow well to FB tank & record FB data every 2 hrs, 24 hr total = 304 bbls, total to recover = 4227 bbls, left to recover = 3825 bbls.

04-16-2009

Recap: Flow well to FB tank on 32/64" choke & record FB data, well logged off @ 2:30 am, open well to 2" w/ no results. SU rig & equip, well is still logged off, MU Exp Chk, 1/2 MS, one jt 2 7/8" tbg & 2.25" F-nipple, TIH w/ 123 jts tbg, set MS @ 4000', RU Kelly hose, break circ w/ air only @ 1150 psi, unload wtr off well w/ air only to FB tank & thru 48/64" choke, record FB data. RD Kelly hose & TIH w/ 38 stds tbg, set 1/2 MS @ 6500', RU Kelly hose & break circ w/ air only @ 1850 psi, unload head off of well thru 48/64" choke, recovered 139 bbls. Transfer wtr f/ FB tank to frac tank, turn well over to FB crew. Unload wtr off well w/ air only to FB tank & thru 48/64" choke, record FB data, SD air @ 18:00 hrs & see if well would flow on its own, NF well to FB tank on 1/2" choke, well is making light gas & light wtr, csg psi is staying around 35 psi.

04-17-2009

Recap: Flow well to FB tank & record FB data, well logged off @ 3:00. SU rig & air equip, unload wtr off well w/ air only, break circ @ 1600 psi, rec 108 bbls, TIH w/ 46 jts tbg, set 1/2 M/S @ 7968', RU 2.5" PS, break circ w/ air only @ 1300 psi. Unload wtr off well w/ air only, rec 125 bbls, PU 2 jts tbg & tag sand @ 8172', CO sand w/ 10 bph air/soap mist, CO to 8219', run 3 bbl sweeps every 20 min for 1 hr, circ well clean, catching samples in a 5 gallon bucket while cleaning out, last sample had approx hand full of sand. LD 1 jt tbg on float, RD 2.5" PS, TOO H w/ 5 stds tbg & set M/S @ 7844', (when pulling off bottom we are pulling @ 85,000 lbs, string wt is 53,000), break circ w/ air, SD air due to wash out in riser on FB tank, repair FB tank w/ new parts I brought from Farmington, NF to FB tank on 32/64" choke, light gas & no wtr.

04-18-2009

Recap: NF well to FB tank, well flowed light gas all night but did not bring back any fluid. Unload wtr off well w/ air only, break circ @ 1850 psi, catch bucket samples every 2 hrs & ck for sand, light sand on 1st 3 tests & f/ 14:00 hrs to 0:00 hrs there was just a trace of sand in each bucket, 24 hr total rec = 268 bbls, total rec = 1560 bbls, total to rec = 4227 bbls, left to rec = 2667 bbls.

04-19-2009

Recap: Unload wtr off well w/ air only to FB tank, catch samples w/ 5 gal bucket every 4 hrs & check for sand, trace sand in bucket, 24 hr rec = 188 bbls, total rec = 1748 bbls, total fluid to rec = 4227 bbls, left to rec = 2479 bbls.

04-20-2009

Recap: Unload well w/ air & record FB data. SU rig & equip, TIH & tag fill 8180', tbg is dragging running into well, pull up on tbg & is pulling approx 95,000 #, RU 6" blooie line to CO thru, RU 2.5" PS, pump two 10 bbl sweeps & unload sand out of S curve, was a little easier to pull, 2.5" PS will stall out if we put more than 2000 # on it, CO 35' of fill to 8215' LD 5 jts w/ PS, TOO H w/ 5 stds, let air flow off well for 1 hr, flare well & well has approx 12' to 14' flare - FLOW TEST: Duration = 1 hr, Test Method = pitot, MCF/D = 420 Mcfd, Csg Psi = 7.0 oz on pitot gauge, Tbg Psi = 0 psi, Gas Type = dry, Gas Disposition = non flaring, Choke Size = 2" open line, 1st to pitots were @ 9.0 oz, 2nd pitot was @ 7.0 oz & 4th pitot was @ 5.5 oz. Unload wtr off well w/ air only & record FB data.

04-21-2009

Recap: Unload wtr off well w/ air thru 6" blooie line, well is flaring w/ air on it, start up yellow dog pump & evap reserve pit. SU rig & equip, TIH w/ 13 jts tbg & tag fill @ 8160', RU 2.5" PS, break circ w/ 10 bph mist, CO fill to 8215', run three 4 bbl sweeps & circ well clean, pulling approx 95,000 # pulling up thru S curve, contact engineer & discuss problem. Use 2.5" PS to pull 20 jts tbg, RD PS & TOO H w/ 215 jts tbg, dragging @ 85,000 until approx 38 stds were pulled, finish pulling into S curve & flush w/ air/soap mist, pump sweeps, blow tbg dry @ 650'. TIH w/ 228 jts tbg, (248 total jts) set 1/2 M/S @ 8000', turn over to night crew. Unload wtr off well w/ air thru 6" blooie line, well is flaring w/ air on it, start up yellow dog pump & evap reserve pit, run bucket test before flare, approx 4" wide stream & is making 5.7 bph wtr.

04-22-2009

Recap: Unload wtr off well, well is flaring w/ air on it so we are evaporating pit w/ spray bar. SU rig & equip, TIH w/ 6 jts tbg & tag fill @ 8175', RU 2.5" PS, break circ w/ 10 bph a/s mist, CO 40' of fill to 8115', run 4 bbl sweeps every 30 min & work tbg, rets = light to med sand, SD mist & blow tbg dry. LD 7 jts tbg, rotating w/ PS because tbg is dragging @ 95,000 # coming off bottom, set 1/2 M/S @ 8000'. LD 7 jts tbg, rotating w/ PS because tbg is dragging @ 95,000 # coming off bottom, set 1/2 M/S @ 8000' non flaring, Choke Size = 2" open line, 1st 2 readings w/ pitot tube = 10 oz, 3rd reading = 8 oz, 4th reading = 7.5 oz. Unload wtr off well w/ air, run bucket test @ 18:00 hrs = 4.5 bph wtr w/ no sand, flare well & evap reserve pit.

04-23-2009

Recap: Unload wtr off well, bucket test = 3.0 bph wtr w/ no sand, flare well w/ air on & evap reserve pit. SU rig & equip, SD air, TIH w/ 7 jts tbg & tag fill @ 8205', break circ w/ 10 bph a/s mist & CO to PBT D (8215'), run 3 bbl sweeps, circ well clean, rets = light to med sand, rotate out w/ 7 jts tbg w/ 2.5" PS due to hvy drag on tbg, RD 2.5" PS & hook up Kelly hose to tbg. **FLOW TEST: Duration = 1 hr, Test Method = pitot, MCF/D = 434 Mcfd, Csg Psi = 8.0 oz on pitot gauge, Tbg Psi = 0 psi, Gas Type = dry, Gas Disposition = non flaring, Choke Size = 2" open line** - Unload wtr off well, bucket test = 3.0 bph wtr w/ no sand, flare well w/ air on & evap reserve pit.

04-24-2009

Recap: Unload wtr off well w/ air, flare well w/ air on & evap reserve pit, well flowing approx 1" wide stream @ blooie line. SU rig & equip, SD air, TIH w/ 7 jts 2 7/8" tbg & tag fill @ 8210' 5' of fill, LD 2 jts on float, **land well @ 8170' KB as follows, one 2.875" 1/2 M/S - Exp Chk, one jt 2.875", J-55, 6.5#, EUE tbg, one 2.25" x 2.875" F-nipple, 252 jts 2.875", J-55, 6.5#, EUE tbg, (253 total jts tbg), F-nipple set @ 8138'**. RD rig floor, NDBOP stack & NUWH & test @ 3000 psi, tested good. Pump out ck @ 1600 psi, reverse flow & get well flowing up tbg, RDMO to the RU #166B, turn well over to production. **FINAL REPORT**

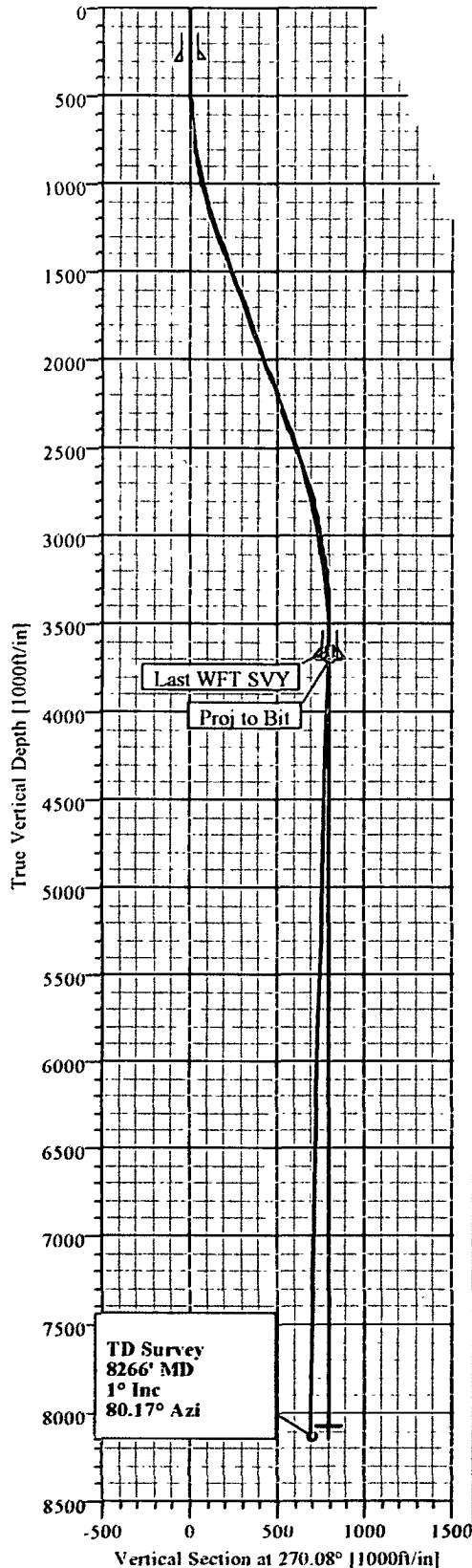
Note: Dakota only completed at this time. Mesaverde will be completed at a later date.



Rosa Unit 9C
Section 11 T31N R6W
380' FSL & 1135' FWL
Rio Arriba County, NM
Plan 2



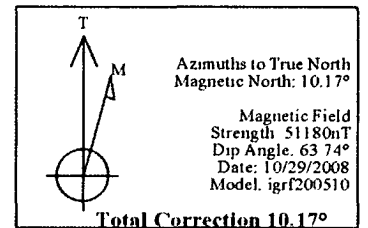
KB ELEVATION: 6400'
GR ELEVATION: 6386'



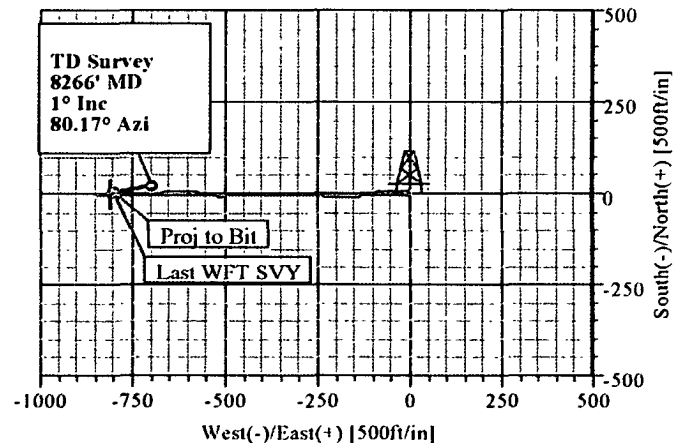
SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec Target
1	0.00	0.00	270.08	0.00	0.00	0.00	0.00	0.00	0.00
2	400.00	0.00	270.08	400.00	0.00	0.00	0.00	0.00	0.00
3	1302.67	20.50	270.08	1283.53	0.23	-159.77	2.27	270.08	159.77
4	2454.38	20.50	270.08	2362.31	0.82	-563.11	0.00	0.00	563.11
5	3821.04	0.00	270.08	3700.00	1.17	-805.00	1.50	180.00	805.00 CS Pt
6	8191.04	0.00	270.08	8070.00	1.17	-805.00	0.00	270.08	805.00 PBHL

WELL DETAILS						
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Rosa Unit 9C	0.00	0.00	2150057.85	2838864.30	36°54'28.548N	107°26'14.496W

TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	8070.00	1.17	-805.00	2150055.68	2838059.30	Circle (Radius: 50)
CS Pt	3700.00	1.17	-805.00	2150055.68	2838059.30	Point



TD Survey: WFT SVY (Rosa Unit 9C/1)									
No	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
114	8266.00	1.00	80.17	8138.28	22.35	-697.06	0.00	0.00	697.09



FORMATION TOP DETAILS			
No	TVDPath	MDPath	Formation
1	2440.00	2536.94	Ojo Alamo
2	2545.00	2649.50	Kirtland
3	2940.00	3062.07	Fruitland
4	3220.00	3345.47	Pictured Cliffs
5	3515.00	3641.36	Lewis
6	5095.00	5222.00	Cliff House Trans
7	5405.00	5532.10	Cliff House
8	5455.00	5582.12	Menefee
9	5705.00	5832.19	Point Look out
10	6010.00	6137.28	Mameos
11	7020.00	7147.53	Gallup
12	7750.00	7877.66	Greenhorn
13	7800.00	7927.67	Graneros
14	7925.00	8052.69	Dakota



Weatherford International, Inc.

Survey Report



Weatherford

Company: WILLIAMS PRODUCTION Date: 4/29/2009 Time: 14:49:05 Page: 1
 Field: Rio Arriba County (NAD 83) Co-ordinate(NE) Reference: Well: Rosa Unit 9C, True North
 Site: Rosa Unit 9C Vertical (TVD) Reference: SITE 6400.0
 Well: Rosa Unit 9C Section (VS) Reference: Well (0.00N,0.00E,270.08Azi)
 Wellpath: 1 Survey Calculation Method: Minimum Curvature Db: Sybase

Field: Rio Arriba County (NAD 83)

Map System: US State Plane Coordinate System 1983
 Geo Datum: GRS 1980
 Sys Datum: Mean Sea Level

Map Zone: New Mexico, Western Zone
 Coordinate System: Well Centre
 Geomagnetic Model: igrf200510

Site: Rosa Unit 9C
 Sect. 11 T31N R6W
 Rio Arriba County, NM

Site Position: Northing: 2150057.85 ft Latitude: 36 54 28.548 N
 From: Geographic Easting: 2838864.30 ft Longitude: 107 26 14.496 W
 Position Uncertainty: 0.00 ft North Reference: True
 Ground Level: 6386.00 ft Grid Convergence: 0.24 deg

Well: Rosa Unit 9C

Slot Name:

Well Position: +N/-S 0.00 ft Northing: 2150057.85 ft Latitude: 36 54 28.548 N
 +E/-W 0.00 ft Easting: 2838864.30 ft Longitude: 107 26 14.496 W
 Position Uncertainty: 0.00 ft

Wellpath: 1

Current Datum: SITE Height 6400.00 ft Drilled From: Surface
 Magnetic Data: 10/29/2008 Tie-on Depth: 0.00 ft
 Field Strength: 51180 nT Above System Datum: Mean Sea Level
 Vertical Section: Depth From (TVD) +N/-S Declination: 10.17 deg
 ft ft +E/-W Mag Dip Angle: 63.74 deg
 Direction deg
 0.00 0.00 0.00 270.08

Survey: WFT SVY

Start Date: 11/4/2008

Company: Weatherford International Ltd.
 Tool: MWD;MWD - Standard

Engineer: Jayme Wilson
 Tied-to: From Surface

Survey: WFT SVY

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	MWD
364.00	1.60	338.69	363.95	4.73	-1.85	1.85	0.44	0.44	0.00	MWD
391.00	1.55	332.01	390.94	5.41	-2.16	2.16	0.70	-0.19	-24.74	MWD
421.00	1.28	319.01	420.93	6.02	-2.57	2.57	1.39	-0.90	-43.33	MWD
452.00	1.13	302.55	451.93	6.45	-3.05	3.06	1.21	-0.48	-53.10	MWD
482.00	1.69	283.30	481.92	6.71	-3.73	3.74	2.42	1.87	-64.17	MWD
512.00	2.06	272.67	511.90	6.83	-4.70	4.71	1.69	1.23	-35.43	MWD
542.00	2.63	269.55	541.88	6.85	-5.93	5.94	1.95	1.90	-10.40	MWD
572.00	3.38	266.42	571.83	6.79	-7.50	7.51	2.56	2.50	-10.43	MWD
602.00	4.13	263.17	601.77	6.61	-9.45	9.46	2.60	2.50	-10.83	MWD
633.00	4.69	264.67	632.68	6.36	-11.82	11.83	1.84	1.81	4.84	MWD
663.00	5.25	263.92	662.57	6.10	-14.41	14.42	1.88	1.87	-2.50	MWD
693.00	5.94	264.30	692.42	5.80	-17.32	17.33	2.30	2.30	1.27	MWD
722.00	6.25	268.05	721.26	5.60	-20.39	20.40	1.74	1.07	12.93	MWD
753.00	7.19	271.55	752.05	5.59	-24.01	24.02	3.31	3.03	11.29	MWD
783.00	7.63	275.67	781.79	5.84	-27.87	27.88	2.30	1.47	13.73	MWD
814.00	8.44	276.30	812.49	6.29	-32.18	32.19	2.63	2.61	2.03	MWD
844.00	9.13	272.80	842.14	6.65	-36.75	36.76	2.91	2.30	-11.67	MWD
875.00	10.00	270.05	872.71	6.77	-41.90	41.91	3.17	2.81	-8.87	MWD
905.00	11.56	268.05	902.18	6.67	-47.51	47.52	5.35	5.20	-6.67	MWD
936.00	12.25	264.55	932.51	6.25	-53.88	53.89	3.22	2.23	-11.29	MWD
967.00	12.98	262.85	962.76	5.51	-60.61	60.62	2.64	2.35	-5.48	MWD
997.00	13.41	265.14	991.97	4.79	-67.42	67.43	2.26	1.43	7.63	MWD
1027.00	14.03	265.20	1021.11	4.20	-74.51	74.52	2.07	2.07	0.20	MWD



Weatherford International, Inc.

Survey Report



Weatherford®

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Well: Rosa Unit 9C Section (VS) Reference: Well (0.00N,0.00E,270.08Azi)
Wellpath: 1 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: WFT SVY

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
1058.00	15.25	263.05	1051.11	3.39	-82.30	82.31	4.31	3.94	-6.94	MWD
1089.00	16.00	262.05	1080.96	2.30	-90.58	90.59	2.57	2.42	-3.23	MWD
1119.00	17.00	263.30	1109.73	1.22	-99.03	99.03	3.54	3.33	4.17	MWD
1150.00	17.88	264.42	1139.30	0.23	-108.27	108.27	3.04	2.84	3.61	MWD
1181.00	18.06	263.92	1168.79	-0.74	-117.78	117.78	0.76	0.58	-1.61	MWD
1213.00	18.25	262.42	1199.20	-1.93	-127.68	127.68	1.58	0.59	-4.69	MWD
1245.00	18.50	262.42	1229.56	-3.26	-137.68	137.68	0.78	0.78	0.00	MWD
1277.00	19.31	264.05	1259.84	-4.48	-147.98	147.97	3.02	2.53	5.09	MWD
1308.00	20.06	265.67	1289.03	-5.41	-158.38	158.37	2.99	2.42	5.23	MWD
1339.00	20.44	266.30	1318.11	-6.16	-169.08	169.07	1.41	1.23	2.03	MWD
1371.00	21.00	268.67	1348.04	-6.66	-180.39	180.38	3.15	1.75	7.41	MWD
1403.00	21.88	272.80	1377.83	-6.50	-192.08	192.07	5.46	2.75	12.91	MWD
1435.00	21.25	271.67	1407.59	-6.04	-203.83	203.82	2.36	-1.97	-3.53	MWD
1467.00	22.01	277.73	1437.34	-5.06	-215.57	215.56	7.37	2.37	18.94	MWD
1498.00	21.14	279.17	1466.17	-3.39	-226.85	226.84	3.29	-2.81	4.65	MWD
1530.00	21.88	276.67	1495.94	-1.78	-238.47	238.46	3.68	2.31	-7.81	MWD
1560.00	22.44	272.92	1523.72	-0.84	-249.74	249.73	5.07	1.87	-12.50	MWD
1593.00	23.19	269.80	1554.14	-0.54	-262.52	262.52	4.31	2.27	-9.45	MWD
1624.00	23.63	268.55	1582.59	-0.72	-274.84	274.84	2.14	1.42	-4.03	MWD
1656.00	23.38	267.92	1611.94	-1.11	-287.60	287.59	1.11	-0.78	-1.97	MWD
1688.00	22.19	269.55	1641.44	-1.39	-299.98	299.98	4.21	-3.72	5.09	MWD
1720.00	21.75	270.30	1671.11	-1.40	-311.96	311.95	1.63	-1.37	2.34	MWD
1752.00	21.75	269.80	1700.84	-1.39	-323.81	323.81	0.58	0.00	-1.56	MWD
1783.00	20.19	269.17	1729.78	-1.49	-334.91	334.90	5.08	-5.03	-2.03	MWD
1815.00	19.81	268.42	1759.85	-1.72	-345.85	345.85	1.43	-1.19	-2.34	MWD
1847.00	19.63	269.17	1789.98	-1.95	-356.64	356.64	0.97	-0.56	2.34	MWD
1878.00	19.63	269.05	1819.17	-2.11	-367.06	367.05	0.13	0.00	-0.39	MWD
1910.00	18.75	270.67	1849.40	-2.14	-377.57	377.57	3.21	-2.75	5.06	MWD
1942.00	18.44	270.80	1879.72	-2.01	-387.78	387.77	0.98	-0.97	0.41	MWD
1973.00	18.63	273.17	1909.12	-1.67	-397.62	397.62	2.51	0.61	7.65	MWD
2004.00	19.19	274.67	1938.44	-0.98	-407.65	407.64	2.39	1.81	4.84	MWD
2036.00	19.56	273.92	1968.63	-0.18	-418.23	418.23	1.39	1.16	-2.34	MWD
2068.00	19.88	270.55	1998.76	0.24	-429.02	429.02	3.69	1.00	-10.53	MWD
2100.00	20.38	268.55	2028.80	0.15	-440.03	440.03	2.66	1.56	-6.25	MWD
2132.00	20.25	268.55	2058.81	-0.13	-451.13	451.13	0.41	-0.41	0.00	MWD
2163.00	20.50	267.42	2087.87	-0.51	-461.92	461.92	1.50	0.81	-3.65	MWD
2195.00	20.63	266.55	2117.83	-1.11	-473.14	473.14	1.04	0.41	-2.72	MWD
2228.00	20.31	266.05	2148.75	-1.85	-484.66	484.66	1.11	-0.97	-1.52	MWD
2259.00	19.69	266.92	2177.88	-2.50	-495.24	495.24	2.22	-2.00	2.81	MWD
2290.00	18.63	268.55	2207.16	-2.91	-505.41	505.40	3.83	-3.42	5.26	MWD
2322.00	17.94	272.80	2237.55	-2.80	-515.44	515.44	4.69	-2.16	13.28	MWD
2354.00	18.44	276.05	2267.95	-2.02	-525.40	525.39	3.53	1.56	10.16	MWD
2385.00	18.81	274.30	2297.33	-1.13	-535.26	535.25	2.16	1.19	-5.65	MWD
2417.00	19.39	274.21	2327.56	-0.35	-545.70	545.70	1.81	1.81	-0.28	MWD
2449.00	20.06	275.42	2357.69	0.56	-556.46	556.46	2.45	2.09	3.78	MWD
2480.00	20.63	275.67	2386.75	1.60	-567.19	567.19	1.86	1.84	0.81	MWD
2512.00	20.69	275.17	2416.69	2.66	-578.43	578.43	0.58	0.19	-1.56	MWD
2543.00	21.13	274.30	2445.65	3.58	-589.45	589.46	1.74	1.42	-2.81	MWD
2575.00	21.31	272.92	2475.48	4.30	-601.01	601.02	1.66	0.56	-4.31	MWD
2607.00	21.00	271.42	2505.33	4.74	-612.55	612.56	1.95	-0.97	-4.69	MWD
2639.00	21.06	270.17	2535.20	4.90	-624.03	624.04	1.41	0.19	-3.91	MWD
2670.00	20.63	268.80	2564.17	4.80	-635.06	635.07	2.10	-1.39	-4.42	MWD
2702.00	20.78	265.80	2594.10	4.27	-646.36	646.36	3.35	0.47	-9.37	MWD



Weatherford International, Inc.

Survey Report



Weatherford

Company: WILLIAMS PRODUCTION
Field: Rio Arriba County (NAD 83)
Site: Rosa Unit 9C
Well: Rosa Unit 9C
Wellpath: 1

Date: 4/29/2009 Time: 14:49:05 Page: 3
Co-ordinate(N/E) Reference: Well: Rosa Unit 9C, True North
Vertical (TVD) Reference: SITE 6400.0
Section (VS) Reference: Well (0.00N,0.00E,270.08Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: WFT SVY

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
2733.00	20.05	264.32	2623.15	3.34	-657.13	657.14	2.88	-2.35	-4.77	MWD
2765.00	18.39	266.85	2653.37	2.52	-667.63	667.63	5.80	-5.19	7.91	MWD
2797.00	17.81	269.42	2683.79	2.19	-677.57	677.57	3.08	-1.81	8.03	MWD
2828.00	18.06	269.30	2713.28	2.09	-687.11	687.11	0.82	0.81	-0.39	MWD
2860.00	16.85	267.57	2743.81	1.83	-696.70	696.71	4.11	-3.78	-5.41	MWD
2923.00	14.56	268.30	2804.45	1.21	-713.74	713.75	3.65	-3.63	1.16	MWD
2955.00	13.56	270.80	2835.49	1.14	-721.52	721.52	3.66	-3.12	7.81	MWD
2987.00	13.19	271.92	2866.62	1.32	-728.92	728.92	1.41	-1.16	3.50	MWD
3019.00	12.39	269.91	2897.83	1.43	-736.00	736.00	2.86	-2.50	-6.28	MWD
3050.00	11.50	268.80	2928.16	1.36	-742.41	742.42	2.96	-2.87	-3.58	MWD
3082.00	10.25	271.92	2959.58	1.39	-748.45	748.45	4.32	-3.91	9.75	MWD
3114.00	10.06	273.80	2991.08	1.67	-754.08	754.08	1.19	-0.59	5.87	MWD
3145.00	10.00	272.92	3021.61	1.99	-759.47	759.47	0.53	-0.19	-2.84	MWD
3177.00	9.19	269.17	3053.16	2.09	-764.80	764.80	3.20	-2.53	-11.72	MWD
3209.00	8.56	268.05	3084.78	1.98	-769.74	769.74	2.04	-1.97	-3.50	MWD
3241.00	8.00	267.30	3116.44	1.79	-774.34	774.34	1.78	-1.75	-2.34	MWD
3273.00	8.00	269.55	3148.13	1.67	-778.79	778.80	0.98	0.00	7.03	MWD
3304.00	7.56	270.80	3178.85	1.68	-782.99	782.99	1.52	-1.42	4.03	MWD
3336.00	6.81	272.92	3210.59	1.80	-786.99	786.99	2.49	-2.34	6.62	MWD
3368.00	6.63	273.42	3242.38	2.01	-790.73	790.73	0.59	-0.56	1.56	MWD
3400.00	6.44	269.80	3274.17	2.12	-794.37	794.37	1.42	-0.59	-11.31	MWD
3431.00	5.88	268.42	3304.99	2.07	-797.69	797.69	1.87	-1.81	-4.45	MWD
3463.00	4.69	270.17	3336.85	2.02	-800.64	800.64	3.75	-3.72	5.47	MWD
3495.00	4.25	274.05	3368.75	2.11	-803.13	803.13	1.67	-1.37	12.12	MWD
3527.00	2.99	286.30	3400.69	2.43	-805.11	805.12	4.60	-3.94	38.28	MWD
3559.00	1.81	311.80	3432.66	3.00	-806.29	806.30	4.89	-3.69	79.69	MWD
3590.00	1.31	339.42	3463.65	3.66	-806.78	806.79	2.87	-1.61	89.10	MWD
3622.00	0.94	50.42	3495.65	4.17	-806.71	806.71	4.19	-1.16	221.88	MWD
3654.00	1.38	70.55	3527.64	4.46	-806.14	806.15	1.85	1.37	62.91	MWD
3686.00	1.69	87.80	3559.63	4.61	-805.31	805.31	1.73	0.97	53.91	MWD
3718.00	1.63	88.80	3591.62	4.64	-804.38	804.39	0.21	-0.19	3.12	MWD
3749.00	1.69	78.67	3622.60	4.74	-803.49	803.50	0.96	0.19	-32.68	MWD
3771.00	1.75	80.87	3644.59	4.85	-802.84	802.85	0.41	0.27	10.00	Last WFT SVY
3825.00	1.75	80.87	3698.57	5.12	-801.21	801.22	0.00	0.00	0.00	Proj to Bit
8115.00	1.00	80.17	7987.30	21.90	-699.65	699.68	0.02	-0.02	-0.02	Rig SVY
8250.00	1.00	80.17	8122.28	22.30	-697.33	697.36	0.00	0.00	0.00	Rig SVY
8266.00	1.00	80.17	8138.28	22.35	-697.06	697.09	0.00	0.00	0.00	TD Survey

Annotation

MD ft	TVD ft	
3771.00	3644.59	Last WFT SVY
3825.00	3698.57	Proj to Bit
8115.00	7987.30	Rig SVY
8250.00	8122.28	Rig SVY
8266.00	8138.28	TD Survey